EPA GTE Operations Support, Inc.

United States Environmental Protection Agency • Region 9 • April 2003

GTE Cleanup Activities, Progress Report # 5 — California Station, Town Square, and Whisman Park

The U.S. Environmental Protection Agency (EPA) invites the community to a meeting on May 7, 2003, to learn about the issue of indoor air contamination and pending air sampling at the former GTE Government Systems Corporation (GTE) site in Mountain View, CA. This site is now the location of the California Station, Town Square and Whisman Park communities.

This fifth progress report will provide a site history and some information about how EPA evaluates the potential for contaminants to move from the groundwater. It also contains the results of EPA's indoor air sampling at seven homes located over the highest concentration of contaminated groundwater, and the next steps in our investigation.

The focus of EPA's work is primarily on the issue of potential indoor air contamination of residences by volatile organic compounds (VOCs) such as trichloroethylene (TCE) migrating from contaminated subsurface groundwater. Currently, GTE Operations Support, Inc. is working with EPA to clean up environmental contamination from past operations in and around the communities.

GTE SITE
Community Meeting

Wednesday, May 7, 2003

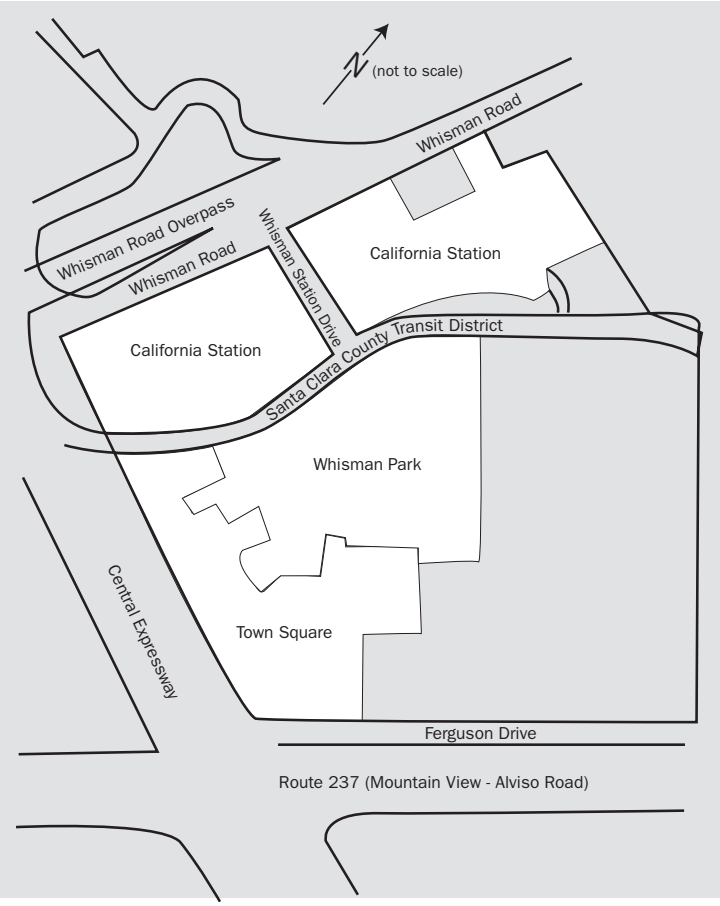
7:00 p.m. to 9:00 p.m.

Edith Landels School • 115 West Dana Street

The GTE site was located at 100 Ferguson Drive in Mountain View, California. Before 1952, the 60-acre property, bordered by the Central Expressway, Ferguson Drive, and Whisman Road [Figure 1], was used for agricultural purposes. From 1952 until 1993, GTE Government Systems Corp. designed and assembled electronics and communications equipment at the site. From 1952 to 1988, the company used solvents in their manufacturing processes. These past practices have resulted in the contamination of soil and subsurface groundwater of the property.

In 1988, EPA ordered GTE to determine if soil and groundwater contamination at the site had migrated to the Middlefield-Ellis-Whisman (MEW) Study Area (a Superfund site) in Mountain View. During this

Figure 1



investigation, two chemicals of significant concern were found in the groundwater above EPA cleanup guidelines: TCE and cis-1,2 dichloroethylene (cis-1,2-DCE). These chemicals are often referred to as VOCs. Three primary areas of groundwater contamination have been identified [Figure 2].

Concurrent with the investigation, GTE began shutting down operations at the site and conducting a cleanup of identified contamination. Subsequently, GTE has extracted and treated over 165 million gallons of groundwater. It is expected that the groundwater remediation effort will take many years, even decades, before the groundwater is returned to drinking water standards. Additionally, GTE has conducted cleanup and removal of contaminated soils, and a soil vapor treatment system was installed to remediate contaminated vapors at the site.

"What are Volatile Organic Compounds (VOCs)?"

VOCs are man-made chemical compounds that contain carbon and tend to evaporate very quickly at room temperature. They are widely used in many industries, from paint to computer manufacturing, and are also found in many household products. VOCs similar to TCE and cis-1,2-DCE have also been widely used to dry clean clothes.

In 1995, GTE sold approximately 2/3 of the property to developers. Following a redevelopment proposal, planning and zoning changes, public hearing, and approval of an Environmental Impact Report (EIR), the City of Mountain View approved the residential redevelopment plan. Various developers and contractors then constructed the California Station, Town Square, and Whisman Park communities. The remaining portion of the property, which GTE also sold, remains commercial with General Dynamics' continued use of two former GTE buildings [Figure 2].

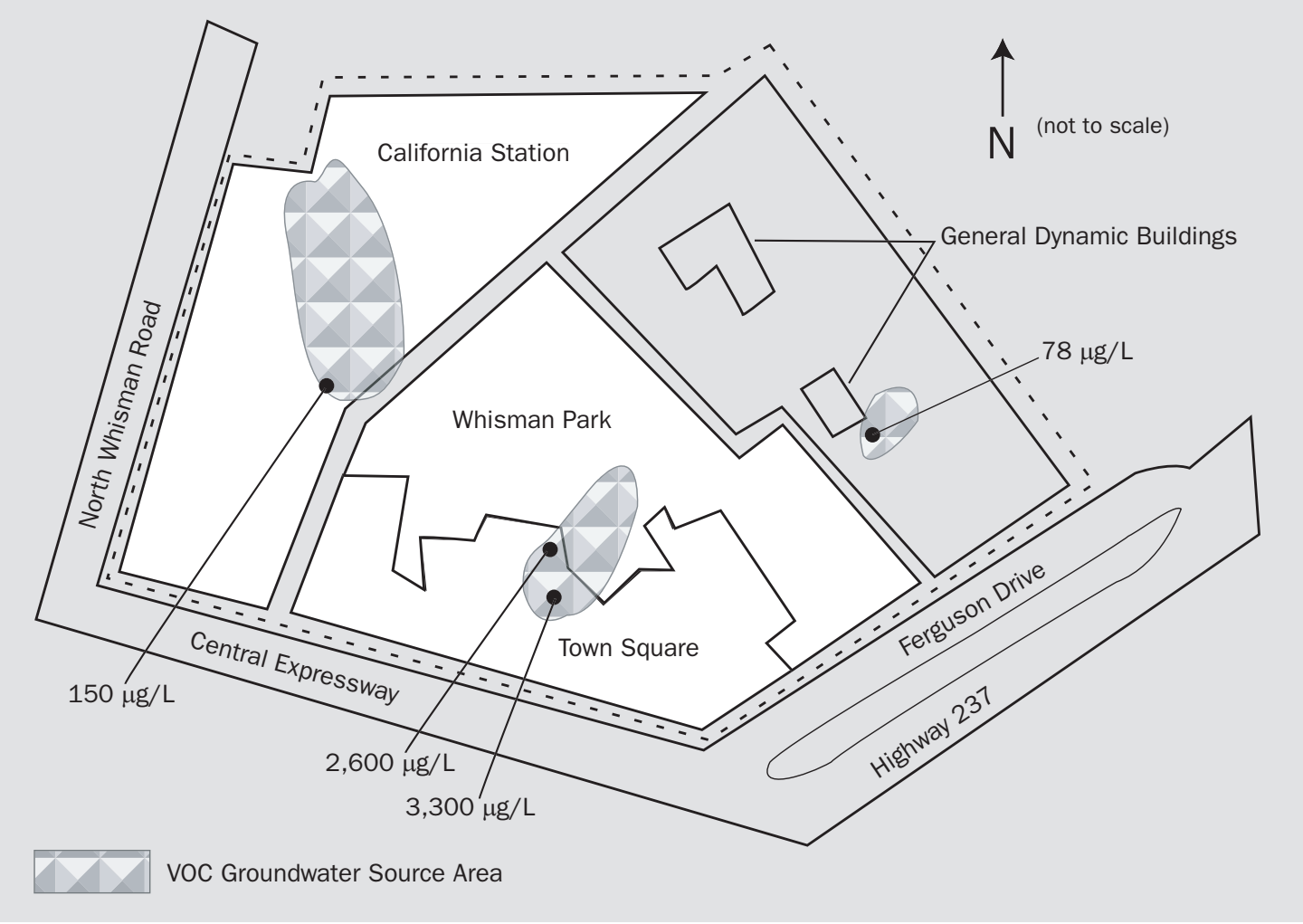
EPA believes it is important to minimize to the fullest extent possible the degree to which residents can be exposed to VOCs. In general there are two primary pathways by which people could potentially be exposed to VOCs: from drinking water (ingestion) and from breathing air (inhalation) containing VOCs. However, because contaminated groundwater below this site is not used as a source of drinking water, ingestion is not a pathway of concern at the former GTE site.

The groundwater at the site is not used as a source of drinking water.

The drinking water here is not affected by the VOCs in the groundwater. Most of the drinking water in Mountain View comes from the Hetch Hetchy Reservoir, with the remaining publicly-supplied drinking water coming from public drinking water wells located elsewhere in Santa Clara County, not on this property. Currently, no one is drinking or otherwise using the contaminated groundwater. The contaminated groundwater that GTE is treating at this site is located approximately 20 to 25 feet below ground level. The ultimate goal is to return the groundwater to drinking water standards.

Figure 2

Location of the Contaminated Groundwater



VOC Migration from the Groundwater

VOCs can evaporate and migrate upwards from contaminated soil or groundwater into the upper soils and the air. As this happens, contaminant levels tend to decrease as the VOCs stick to soil particles and mix with the clean air between soil grains. Given the general contaminant levels in the groundwater and soil at the GTE site, any VOCs that rise to the surface and enter the ambient air would be at negligible levels. But, because such contaminants can, under certain circumstances, become trapped or concentrated inside of buildings, EPA is focusing on the potential for indoor air contamination at this site.

Between 1984 and 1998, hundreds of soil, soil-vapor and groundwater samples were collected at the GTE site to evaluate the nature and extent of contamination. TCE groundwater contamination at the site was generally found to be between 30 and 100 micrograms per liter of groundwater (here "micrograms/liter" is the same as "parts per billion"). The Maximum Contaminant Level (MCL) that EPA uses as its minimum safety level for drinking water is 5 micrograms of TCE per liter of water. Three specific areas with relatively high concentrations of groundwater contamination were identified [Figure 2]. At EPA's request in 1998, GTE installed a series of soil gas monitoring probes in the vicinity of the highest point of groundwater contamination to better measure and monitor the contamination.

As a precautionary measure, EPA began indoor air sampling in seven homes located directly over or in close proximity to the highest concentration level of TCE in groundwater. Two rounds of sampling were conducted in 2000. No TCE was detected in two of the homes. Five of the homes had detectable levels of TCE in the indoor air, but none were found to be above the EPA health protective risk range. No other VOCs, such as cis-1,2 DCE or vinyl chloride, were detected in any of the homes. Additionally, no VOCs were detected in the ambient air.

In 2001, anticipating a change in the toxicity value for TCE, EPA decided to reexamine the TCE exposure potential at the homes. This time, using a newly proposed and more protective value for TCE, EPA determined that the four lowest risk homes were still within the protective risk range for human health, but that the single home demonstrating an elevated level of TCE in indoor air would require reassessment.

In March 2001 and October 2002, the single residence was again sampled and reevaluated. In November 2002, it was determined that this single residence failed to meet EPA's proposed new health-protective risk range for TCE, and that action must be taken. Working with GTE, EPA had a sub-slab depressurization system installed at the residence to vent the soil gas from under the home before it could contaminate the indoor air. That system became operational in January 2003 [Figure 4]. Subsequent sampling of the home has shown more than a 90 percent reduction in indoor TCE levels.

EPA Risk Assessment

Risk assessment is a tool used by EPA to estimate the likelihood of health or environmental impacts from exposure to different amounts of chemical substances. EPA health risk assessments quantify the likelihood of injury or disease resulting from exposure to environmental chemicals. In conducting a health risk assessment, EPA considers a compound's toxicity, the compound's human or ecological exposure pathways, and the compound's estimated concentration and duration of exposure. Health risks from chemical exposures are compared to the Agency's "health-protective or acceptable risk range" guidelines. The risk-range reflects the likelihood or probability of developing cancer from potential chemical exposures specific to the site. The range spans from one additional case of cancer (above background) in a population of one million exposed individuals (often expressed as 1×10^{-6}), to 100 additional cases of cancer in a population of one million exposed individuals (often expressed as 1×10^{-4}). Should the risk estimate from a site or facility exceed the health-protective risk range EPA may take additional action [Figure 3].

Based upon the sampling events conducted in April and November 2000, EPA determined that no short-term, or acute risk was likely for residents of the community. Those sampling results revealed that TCE exposure occurred in four of the homes and fell below the one in a million benchmark. The health risks from TCE in a single home fell squarely within EPA's risk-range (between 1×10^{-4} and 1×10^{-6}), and a continued monitoring strategy was recommended for that home. In the remaining two homes, TCE was not detected.

Figure 3

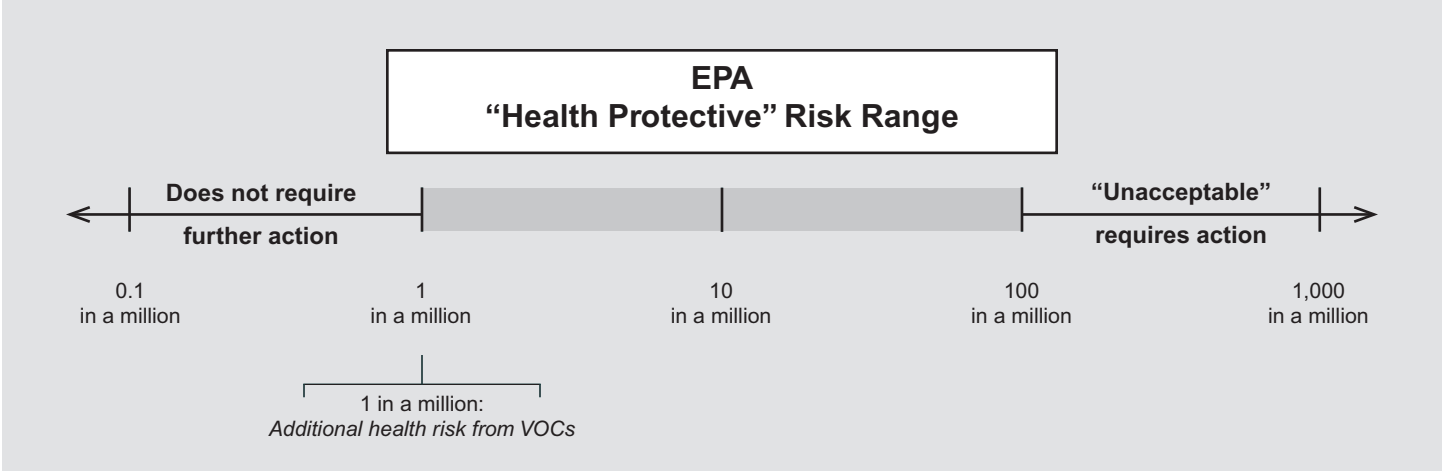
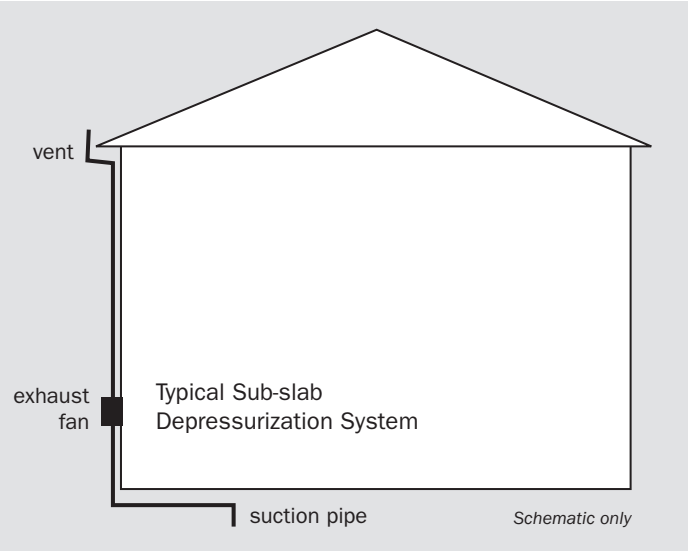


Figure 4

Typical Indoor Air Remediation System



Community Outreach

EPA met twice with the community prior to its sampling of homes. Additionally, in January 2003, EPA mailed out a fact sheet and held a public meeting in Mountain View to provide information to the community on the issue of the indoor air pathway at the GTE site and three local Superfund sites (MEW Study Area, Moffett NAS and JASCO Chemical). In February 2003, EPA participated in a Study Session with the Mountain View City Council to address the issue of VOCs at EPA sites in the city. And on April 9, 2003, EPA met with the community to assist in the development of a Community Advisory Group (CAG) to look at the activities at the four federal cleanup sites in Mountain View (see below).

For additional information concerning the GTE site, you can contact the EPA representatives listed at the back of this fact sheet or you can visit the Mountain View Public Library, where a number of GTE cleanup documents are located.

Community Advisory Group to Form

At an EPA-sponsored meeting on April 9th, 140 interested people voted unanimously to form a CAG for the four federal cleanup sites in Mountain View. The purpose of this CAG is to help people interested in the GTE, MEW, Moffett, and JASCO sites become involved in the cleanup decision-making process. At future meetings, people will hear presentations on cleanup efforts and site issues and discuss them with EPA and other interested parties. A CAG is a way for people to learn more about the GTE site and make their voices heard. The first formal meeting of the CAG is scheduled for Wednesday, May 14th from 6 p.m. to 9 p.m. at the Mountain View Community Center, 2001 South Rengstorff Avenue in Mountain View. People interested in being on the CAG mailing list should contact EPA.

Do You Need Language Translation?

EPA is assessing the Spanish translation needs for federal cleanup sites in the City of Mountain View. If you need such a service, either for GTE meetings or for any of the meetings related to cleanup at the four sites, please use the mailing coupon on page 6 to indicate your needs. If you have other language translation needs, please indicate this on the mailing coupon. EPA will address other language needs on an individual basis.

Next Steps

EPA is currently working with GTE on the implementation of a comprehensive site-wide investigation of the former GTE facility, focused primarily upon TCE and the indoor air pathway. This multi-phase investigation will include additional groundwater, soil-vapor and indoor and ambient air sampling within the community. This ongoing effort will help us to better understand and respond to any remaining potential exposure risks and any other evolving issues and concerns. While the planning and coordination for this effort has already begun, actual implementation of indoor air sampling (our first priority) will not begin until later in the spring or early summer 2003.

For More Information:

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Or toll-free at 800-231-3075.

Information is also available on EPA's web sites at http://www.epa.gov (EPA Headquarters home page), http://www.epa.gov/region09 (EPA Region 9 home page), and http://yosemite.epa.gov/r9/sfund/overview.nsf/ (Superfund site overviews). Documents and Web pages are generally in English only.

MAILING LIST COUPON

If you did not receive this fact sheet in the mail and would like to be included on the mailing list to receive future mailings about the Community Advisory Group and/or the Mountain View sites, please fill out the coupon below and return to:

David Cooper, Community Involvement Coordinator
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street (SFD-3)
San Francisco, CA 94105

Please indicate which site mailing lists you would like to be on:

☐ MEW Study Area ☐ Jasco Chemical Site
☐ NAS Moffett Field Site ☐ **GTE Site**

Please indicate language needs:

☐ Spanish translation for fact sheets
☐ Spanish translation for public meetings
☐ Other language translation needs

_____
Please indicate language

☐ Please indicate if you would like to be on the mailing list and e-mail list for the Community Advisory Group. Please provide your e-mail address where it is indicated at the bottom of this mailing coupon.

Please print all information

Name: _____

Address: _____

_____

Phone (optional): _____ E-Mail (optional): _____

Note: You may e-mail above information to: cooper.david@epa.gov or leave a toll-free message at 800-231-3075.

EPA

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